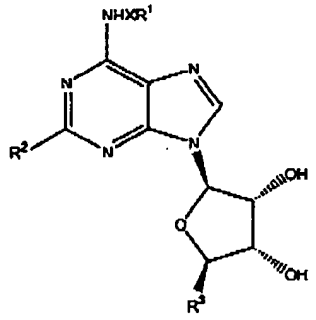
AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions and listing of claims in the application. For the Examiner's convenience, a complete listing of all pending claims is attached as Appendix A.

LISTING OF CLAIMS:

1. (presently amended) A compound of the formula:



Formula I

wherein:

R^1 is ~~optionally substituted~~ lower alkyl of 1-6 carbon atoms, ~~optionally substituted~~ cycloalkyl of 3-6 carbon atoms, ~~optionally substituted aryl~~ or phenyl optionally substituted by halo, ~~optionally substituted heteroaryl~~;

X is a covalent bond or ~~optionally substituted~~ alkylene of 1-3 carbon atoms;

R^2 is R^4-Z-Y-C≡C- in which Y is alkylene of 1-3 carbon atoms, Z is oxygen, sulfur or -NH-, and R^4 is phenyl optionally substituted by halo or lower alkoxy; or

R^2 is ~~optionally substituted~~ pyrazolyl optionally substituted by phenyl or benzyl, which are optionally substituted by halo, lower alkyl, or lower alkoxy, or;

R^2 is pyrazolyl substituted by (lower alkyl)-O-C(O)-, $-C(O)NH_2$, -C(O)NH-(lower alkyl), cycloalkyl of 3-6 carbon atoms, pyrimidinyl, pyridinyl, benzoxazolyl, quinazolyl, isoquinazolyl, or pyrazolyl, said pyrimidinyl, pyridinyl, benzoxazolyl, quinazolyl, isoquinazolyl, or pyrazolyl all of which are optionally substituted by 1, 2 or 3 lower alkyl groups;

~~in which Y is optionally substituted alkylene of 1-3 carbon atoms, Z is oxygen, sulfur or -NH-, and R^4 is optionally substituted aryl phenyl optionally substituted by halo or lower alkoxy or optionally substituted heteroaryl;~~ and

R^3 is hydroxymethyl or -C(O)-NR^5R^6;

in which R^5 and R^6 are independently hydrogen or lower alkyl.

2. (presently amended) The compound of claim 1, wherein R^2 is ~~optionally substituted~~ pyrazol-1-yl substituted by phenyl, which is optionally substituted by halo, lower alkyl, or lower alkoxy.

3. (presently amended) The compound of claim 2, wherein R^1 is ~~optionally substituted~~ lower alkyl of 1-6 carbon atoms or ~~optionally substituted aryl~~ phenyl optionally substituted by halo, and R^3 is hydroxymethyl.

4. (canceled)

5. (canceled)

6. (original) The compound of claim 3, wherein R^1 is ~~optionally substituted~~ lower alkyl of 1-6 carbon atoms and X is a covalent bond.

7. (original) The compound of claim 6, wherein R^1 is methyl and R^2 is 4-(4-methoxyphenyl)pyrazol-1-yl, namely (4S,2R,3R,5R)-5-(hydroxymethyl)-2-{2-[4-(4-methoxyphenyl)pyrazolyl]-6-(methylamino)purin-9-yl}oxolane-3,4-diol.

8. (original) The compound of claim 6, wherein R^1 is n-propyl and R^2 is 4-(4-methoxyphenyl)pyrazol-1-yl, namely (4S,2R,3R,5R)-5-(hydroxymethyl)-2-{2-[4-(4-methoxyphenyl)pyrazolyl]-6-(n-propylamino)purin-9-yl}oxolane-3,4-diol.

9. (original) The compound of claim 6, wherein R^1 is methyl and R^2 is 4-(4-chlorobenzylaminocarbonyl)pyrazol-1-yl, namely (1-{9-[(4S,2R,3R,5R)-3,4-dihydroxy-5-(hydroxymethyl)oxolan-2-yl]-6-(methylamino)purin-2-yl}pyrazol-4-yl)-N-(4-chlorophenyl)carboxamide.

10. (original) The compound of claim 6, wherein R^1 is methyl and R^2 is 4-(4-chlorobenzylaminocarbonyl)pyrazol-1-yl, namely (1-{9-[(4S,2R,3R,5R)-3,4-dihydroxy-5-(hydroxymethyl)oxolan-2-yl]-6-(methylamino)purin-2-yl}pyrazol-4-yl)-N-(4-chlorophenyl)carboxamide.

11. (presently amended) The compound of claim 4 1, wherein R^1 is lower alkyl of 1-6 carbon atoms, R^2 is pyrazo-1-yl substituted by ~~optionally substituted heteroaryl~~ (lower alkyl)-O-C(O)-, $-C(O)NH_2$, -C(O)NH-(lower alkyl), cycloalkyl of 3-6 carbon atoms, pyrimidinyl, pyridinyl, benzoxazolyl, quinazolyl, isoquinazolyl, or pyrazolyl, said pyrimidinyl, pyridinyl, benzoxazolyl, quinazolyl, isoquinazolyl, or pyrazolyl all of which are optionally substituted by 1, 2 or 3 lower alkyl groups, R^3 is hydroxymethyl, and X is a covalent bond.

12. (original) The compound of claim 11, wherein R^1 is n-propyl and R^2 is 4-(pyrid-2-yl)pyrazol-1-yl, namely (4S,2R,3R,5R)-5-(hydroxymethyl)-2-[4-(pyridin-2-yl)pyrazolyl]-6-(n-propylamino)purin-9-yl}oxolane-3,4-diol.

13. (presently amended) The compound of claim 5, wherein R^1 is ~~optionally substituted aryl~~ phenyl optionally substituted by halo and X is ~~alkylene~~ methylene.

14. (presently amended) The compound of claim 13, wherein R^1 is ~~3-iodobenzyl~~ 3-iodophenyl and R^2 is 4-(4-methoxyphenyl)pyrazol-1-yl, namely (4S,2R,3R,5R)-5-(hydroxymethyl)-2-{2-[4-(4-methoxyphenyl)pyrazolyl]-6-(3-iodobenzylamino)purin-9-yl}oxolane-3,4-diol.

15. (presently amended) The compound of claim 1, wherein R^2 is ~~optionally substituted~~ pyrazol-4-yl optionally substituted by benzyl.

16. (presently amended) The compound of claim 15, wherein R^1 is ~~optionally substituted alkyl~~ lower alkyl of 1-6 carbon atoms and R^3 is hydroxymethyl ~~or optionally substituted aryl, R^3 is hydroxymethyl, and X is a covalent bond~~.

17. (original) The compound of claim 16, wherein R^1 is methyl, R^2 is 1-benzylpyrazol-4-yl, R^3 is hydroxymethyl, and X is a covalent bond, namely (4S,2R,3R,5R)-5-(hydroxymethyl)-2-{2-[1-benzylpyrazolyl]-6-(methylamino)purin-9-yl}oxolane-3,4-diol.

18. (original) The compound of claim 16, wherein R^1 is n-propyll, R^2 is 1-benzylpyrazol-4-yl, R^3 is hydroxymethyl, and X is a covalent bond, namely (4S,2R,3R,5R)-5-(hydroxymethyl)-2-{2-[1-benzylpyrazolyl]-6-(n-propylamino)purin-9-yl}oxolane-3,4-diol.

19. (original) The compound of claim 1, wherein R^2 is R^4-Z-Y-C≡C-.

20. (presently amended) The compound of claim 19, wherein R^4 is ~~optionally substituted~~ phenyl optionally substituted by halo or lower alkoxy, R^3 is hydroxymethyl, and Y is alkylene of 1-3 carbon atoms.

21. (original) The compound of claim 20, wherein R^4 is phenyl optionally substituted by methoxy or chloro, and Y is methylene.

22. (presently amended) The compound of claim 21, wherein R^1 is ~~optionally substituted~~ alkyl of 1-6 carbon atoms, X is a covalent bond~~, and R^3 is hydroxymethyl~~.

23. (original) The compound of claim 22, wherein R^1 is methyl, R^4 is phenyl and Z is oxygen, namely 2-hydroxymethyl-5-[6-methylamino-2-(3-phenoxypropyn-1-yl)purin-9-yl]-tetrahydrofuran-3,4-diol.

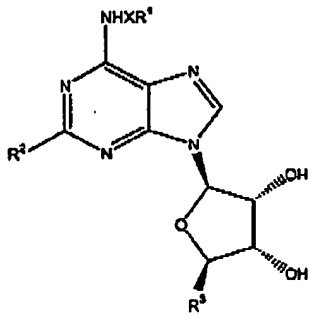
24. (canceled) A method of treating a disease state in a mammal that is alleviable by treatment with a A_3 adenosine receptor agonist, comprising administering to a mammal in need thereof a therapeutically effective dose of a compound of claim 1.

25. canceled) The method of claim 24, wherein the disease state is cancer.

26. (canceled) The method of claim 24, wherein the disease state is neutropenia.

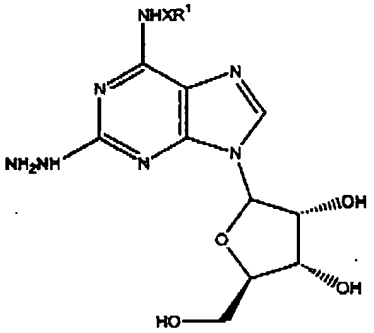
27. (original) A pharmaceutical composition comprising at least one pharmaceutically acceptable excipient and a therapeutically effective amount of a compound of claim 1.

28. (canceled) A process for the preparation of a compound of Formula I:



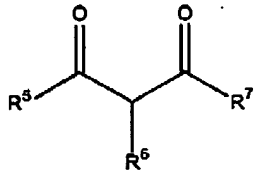
in which R^2 is optionally substituted pyrazol-1-yl;
comprising:

contacting a compound of the formula:



(3)

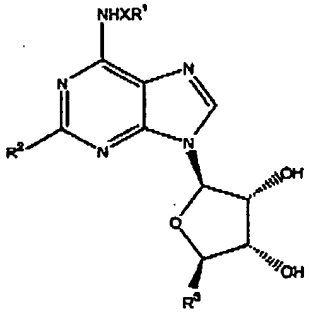
with a compound of formula:



(4)

29. (canceled) The process of claim 28, wherein the reaction is conducted in an inert solvent chosen from methanol, ethanol, n-propanol, isopropanol, and t-butanol.

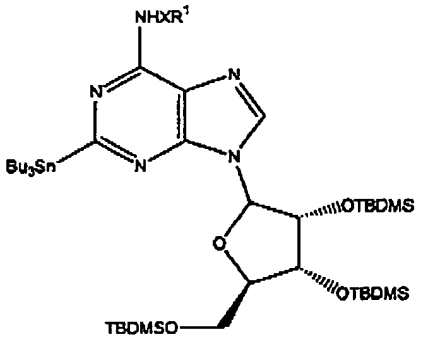
30. (canceled) A process for the preparation of a compound of Formula I:



in which R^2 is optionally substituted pyrazol-4-yl;

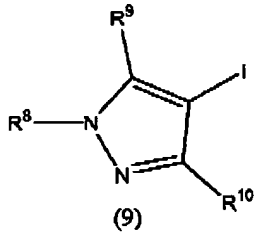
comprising

contacting a compound of the formula:



(8)

with a compound of the formula:



(9)

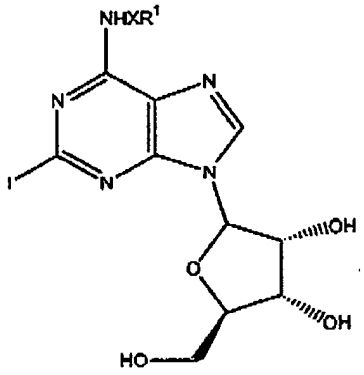
in the presence of a palladium complex and a copper salt in an inert solvent, and contacting the product with a mild acid.

31. (canceled) The process of claim 30, wherein the palladium complex is $Pd(PPh_3)_4$, the copper salt is CuI, the inert solvent is N,N-dimethylformamide, and the mild acid is ammonium fluoride.

32. (canceled) A process for the preparation of a compound of claim 1, in which R^2 is R^4-Z-Y-C≡C-;

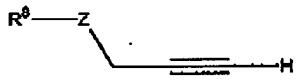
comprising:

contacting in an inert solvent a compound of the formula:



(12)

with a compound of the formula:



(13)

in the presence of a mild base, a copper salt and a palladium catalyst.

33. (canceled) The process of claim 32, wherein the inert solvent is N, N-dimethylformamide, the base is triethylamine, the copper salt is copper iodide, and the palladium catalyst is dichlorobis-(triphenylphosphine)palladium(II).

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